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Lack good options for low carbon transport, steel and cement production

Climate discussions center on the need to replace fossil-fuel power plants with technologies like wind turbines and solar panels. But a new paper in Science offers a stark reminder that there are still huge parts of the global energy system where we simply don't have affordable ways of halting greenhouse-gas emissions. Around 27 % of global carbon dioxide emissions from all fossil fuel and industrial sources, particularly aviation, shipping, and structural materials, are difficult to eliminate with today's technology.

The declining cost and improving performance of lithium-ion batteries and hydrogen fuel cells has made it possible to begin cleaning up big portions of the transportation industry, including cars, light-duty trucks, and short-haul semis. But batteries and fuel cells are still too heavy and expensive for long-distance hauling and shipping, as well as the vast majority of air travel. For these, the authors conclude, liquid fuels are likely to remain the preferred energy source, given the amount of energy that can be packed into a given weight and volume.

"If we're really ambitious about meeting our climate targets, we need to be tackling these hard sectors now," says the paper's lead author, Steven Davis, a system scientist at the University of California.

Source: Technology Review

https://www.technologyreview.com/s/611498/we-still-have-no-idea-how-to-eliminate-more-than-a-quarter-of-energy-emissions/?utm_source=newsletters&utm_medium=email&utm_content=2018_06_29&utm_campaign=the_download

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